areas, the affordable housing goals ranged from about 160 housing units in the Dousman-Eagle area to about 2,880 housing units in the Waukesha-Pewaukee area.

## Housing Plan Implementation

The housing allocation strategy accomplishes an important, but limited, function: it establishes affordable housing goals for the County and subareas of the County. The allocation by itself, however, does not result in the provision of any additional affordable housing. The provision of affordable housing in accordance with the housing allocation strategy will require concerted efforts on the part of private and nonprofit entities working in collaboration with local units of government and the County.

The provision of additional affordable housing as recommended in the allocation strategy will require some revision of local zoning ordinances. The plan recommends that each community in the County containing land within an existing or proposed public sanitary sewer service area review its residential zoning district regulations and revise those regulation as appropriate so as to provide for a full range of housing structure types, single-family, twofamily, and multi-family, and to allow for minimum size dwellings on minimum-size lots in some areas. The plan further recommends that each such community should consider establishing planned unit development provisions in its zoning ordinance, since the design of sites involving smaller dwelling units and higher density may be significantly enhanced through planned unit development techniques.

The housing plan further recommends that existing public and quasi-public housing agencies, including Community Housing Initiative, Inc., the Waukesha County Lender Consortium, the Waukesha County Homebuyer Program, the Waukesha County Community Development Block Grant Board, the Waukesha County Housing Authority, the City of Waukesha Housing Authority, and the City of New Berlin Housing Authority, continue to pursue efforts to provide affordable housing in the County. Owing to a dramatic decrease in Federal funding of housing assistance programs during the 1980s, these local agencies have been called upon to assume a greater role in addressing housing problems. The housing plan recommends that these agencies continue to explore new and innovative ways to provide affordable housing, leveraging the maximum of private sector involvement possible in such efforts.

Over the past several years, the County Executive's Office has assumed a leading role in coordinating

housing programs within the County and sponsoring new housing initiatives. The housing plan recommends that the County Executive's Office continue that role in the immediate future, recognizing that the County Executive may wish to transfer that role to another county department at some time.

#### TRANSPORTATION PLAN

Development of Waukesha County in accordance with the recommended County land use plan through the year 2010 and beyond will require major improvements to the County transportation system. Chapter XII of this report presented an arterial street and highway system plan and a public transit system plan intended to serve the County through the year 2010. It also described additional functional improvements to the arterial street system and additional public transit services which may be expected to be required to serve the County under full development of the recommended County land use plan, conditions which, as already noted, are not likely to be achieved until after the year 2050.

## Arterial Streets and Highways

The arterial street and highway system plan included in the County development plan is the system plan recommended for Waukesha County under the year 2010 regional transportation system plan, adopted by the Waukesha County Board of Supervisors in June 1995 and reaffirmed in the second-generation jurisdictional highway system plan for the County adopted by the County Board in July 1995. The proposed arterial street and highway system would adequately serve and support the pattern of urban land uses in the County envisioned under the year 2010 stage of the recommended County land use plan.

The recommended year 2010 arterial street and highway system plan for the County consists of 774 center line miles of arterial facilities (see Map 94 in Chapter XII). This represents an increase of 58 centerline miles over the arterial system as it existed in 1991 and includes 26 miles of new facilities proposed to be constructed and 32 miles of existing land-access and collector streets proposed to be converted to arterial facilities by the year 2010. About 134 miles of existing facilities included in the proposed 774-mile arterial street and highway system would be widened to provide additional travel lanes. Under the plan, then, the capacity of the arterial street system in the County would be expanded through widening or new construction by a total of 160 miles, nearly a 21 percent expansion

of the capacity of the 774-mile system. The rest of the proposed system, 614 miles, consists of existing facilities which would need to be preserved through resurfacing or reconstruction, as appropriate.

Under the year 2010 plan, State trunk highways would account for about 230 miles, or 30 percent, of the total system mileage within the County; County trunk highways would account for about 413 miles, or 53 percent; and local trunk highways would account for about 131 miles, or 17 percent.

Total capital costs of the arterial street and highway system, that is, the cost required for system expansion, including related land acquisition costs and system preservation costs, would approximate \$694 million in 1994 dollars. The State trunk highways account for \$393 million, or 57 percent of the capital cost; the County trunk highways account for \$243 million, or 35 percent; and the local trunk highways account for \$58 million, or 8 percent.

With respect to the County component of the arterial street and highway system plan, it should be noted that the average annual capital expenditure required by the County would approximate \$15.25 million. This compares to an annual anticipated availability of funds for capital outlay of \$11.19 million, including an annual average capital outlay for highways by Waukesha County of \$4.08 million, equal to the annual average capital outlay over the years 1988 through 1993; an average availability of \$4.00 million in Federal and State capital aids; and an annual average availability of \$3.11 million in State general transportation aids.

Growth in the County after the year 2010 envisioned under the buildout land use plan would necessitate arterial street and highway improvements beyond those recommended in the year 2010 arterial street and highway system plan. A total of 108 miles of facilities included in the 2010 arterial system plan, including 16 miles of freeway and 92 miles of standard arterial streets, would have to be widened to accommodate the buildout conditions. In addition, the arterial system would have to be expanded by including Guthrie Road between Sunset Drive and STH 164; by extending Springdale Road from Capitol Drive (STH 190) to Lisbon Road (CTH K); and by constructing an arterial highway between STH 59 and CTH ZZ, west of North Prairie. These three additions would add nine centerline miles to the arterial system, resulting in a buildout plan arterial system mileage of 783 miles. Under buildout conditions, the capacity of the arterial system would be expanded through widening or new

construction of a total of 111 miles, an approximately 14 percent expansion of the 774-mile system recommended for the year 2010 stage of the plan. The facility construction costs, exclusive of right-of-way acquisition costs, attendant to the improvements required to accommodate planned urban growth in the County after the year 2010, that is, costs over and above those envisioned under the 2010 transportation plan, would approximate \$230 million. The total cost may be expected to be considerably greater, depending on the extent to which the proposed street widenings and other improvements require additional right-of-way acquisition.

As a result of the increased traffic volumes related to full development of the recommended County land use plan, the level of service provided by the East-West Freeway (IH 94) between STH 16 and the Waukesha-Milwaukee County line may be expected to decline significantly. Currently, moderate congestion, with restrictions on lane changes and speed reductions of 5 to 10 miles per hour, occurs in both directions on IH 94 between STH 18 and the Milwaukee-Waukesha County line during morning and afternoon peak traffic hours, except on eastbound IH 94 east of Moorland Road, where severe congestion occurs during the morning peak hour. Under the 2010 stage of the plan, during both morning and afternoon peak hours, severe congestion, with reduced speeds of 35 to 45 miles per hour, would be expected between STH 16 and USH 18 and extreme congestion, with stop-and-go driving and speeds of 30 miles per hour or less, would be expected between USH 18 and the Milwaukee-Waukesha County line. Under full development conditions, during morning and afternoon peak hours, extreme congestion would be expected on the entire stretch of IH 94 between STH 16 and the Milwaukee-Waukesha County line.

#### Transit System

Under the recommended year 2010 transit system plan, rapid transit service would be provided by buses operating over freeways in the County, providing service between outlying areas of the County and Milwaukee. Service would be provided in both directions during peak periods. The number of miles and hours transit vehicles would operate on an average weekday would be increased. Initially, all service would be provided by buses operating over the freeway system, with service connections on selected surface arterial streets and highways. Ultimately, depending upon the results of the East-West Corridor Transit study currently being conducted by the Wisconsin Department of Transportation, the rapid-transit service in the eastern portion

of the County could be provided by buses operating over busways within, or parallel to, the IH 94 freeway corridor. The plan also recognizes the potential to establish commuter-rail passenger service as an alternative to bus-on-freeway or bus-on-busway rapid-transit service in the Milwaukee-Oconomowoc corridor. The plan recommends that the commuter-rail passenger service potential be evaluated in a "major investment study" for this corridor.

Under the year 2010 transit system plan, express transit service in Waukesha County would be provided by buses operating with limited stops in mixed traffic over surface arterial streets and highways. The plan calls for one express transit route in the County, providing service between the City of Waukesha and Milwaukee.

Under the year 2010 transit system plan, local transit service would be provided by buses operating over arterial and collector streets, with frequent stops for passenger boarding and alighting. The plan proposes the continuation of local transit service in the City of Waukesha and in the Waukesha-Brookfield-Milwaukee corridor, and the expansion of local transit service into medium-density residential areas on the east side of the County. The plan also envisions the provision of local transit service within certain economic activity centers along IH 94, including centers at STH 67, STH 83, and STH 164. Such service would facilitate circulation within those centers and would be linked to the rapid-transit system.

The average annual capital costs for implementing the County component of the recommended transit system plan would approximate \$1.5 million through the year 2010. The average annual operating cost for implementing the County component of the transit system plan through the year 2010. excluding operating costs met by transit fares, would approximate \$4.9 million. The total average annual capital and operating cost for the County component of the plan, excluding amounts met by transit fares, would thus approximate \$6.4 million. Between 1990 and 1994, the actual average annual outlay by the County for transit included \$0.2 million for capital expenditures and \$1.3 million for operating expenditures, or a total expenditure of \$1.5 million per year. Implementation of the transit system plan would thus require a significant increase in the County's annual outlay for transit services.

In view of the relatively low density which would characterize much of the incremental development envisioned under the County land use plan after the year 2010, it is anticipated that only minimal expansion of the transit service area and frequency proposed under the year 2010 plan would be feasible under plan buildout conditions. The modest additions to the transit network and service levels beyond those recommended in the year 2010 plan which may be expected to be warranted under buildout conditions consist of shuttle-bus service which would link rapid-transit service stations to the larger and denser centers of population and employment growth in outlying areas.

Transportation System Plan Implementation

Responsibility for implementation of the arterial street and highway system plan rests with the Wisconsin Department of Transportation; the Waukesha County Board and its Public Works Committee: and the city councils, village boards, and town boards and their respective boards of public works. The aforementioned agencies and units of government should cooperatively seek implementation of the jurisdictional transfers recommended in the plan and proceed with preliminary engineering, right-of-way acquisition, and facility construction in accordance with the plan. Waukesha County should amend its highway width map to reflect the rightsof-way of planned State and County trunk highways. Cities, villages, and towns should approve the revised County highway width map and adopt local official maps showing thereon planned State, County, and local trunk highway facilities. The County, city, village, and town governments should exercise their land subdivision control authority to prevent the encroachment of new land divisions into areas needed for the rights-of-way of planned arterial facilities.

Implementation of the arterial street and highway system plan over the next decade should emphasize right-of-way acquisition, engineering, and construction of those facilities called for by the year 2010. During this time, however, efforts should be made to protect from urban encroachment the rights-of-way of arterial facilities needed under County land use plan buildout conditions.

Responsibility for implementation of the recommended transit system plan rests largely with Waukesha County and the City of Waukesha. It is recommended that Waukesha County continue to provide rapid and express transit services within the County through agreements with Milwaukee and Washington Counties, as appropriate. It is also recommended that Waukesha County, working cooperatively with the local units of government

in the County, implement the local transit service recommendations of the plan, including the provision of local transit service within the eastern portion of the County and within the economic activity centers along IH 94. It is recommended that the City of Waukesha Transit System Utility continue to provide local fixed route transit service within the City of Waukesha and adjacent areas. It is further recommended that, over time, as the City transit system is increasingly called upon to serve areas beyond the City limits, the City, in conjunction with Waukesha County, undertake a cooperative study to determine the manner in which the transit function can be most cost-efficiently administered, with the transfer of the local transit function from the City to the County among the options to be considered. Finally, it is recommended that the Wisconsin Department of Transportation, the Waukesha County Board of Supervisors, and the Regional Planning Commission cooperatively conduct the proposed major investment study regarding commuter-rail service as an alternative to bus-on-freeway or bus-on-busway rapid-transit service in the Milwaukee to Oconomowoc corridor.

# PARK AND OPEN SPACE PLAN

The recommended park and open space plan is intended to serve as a guide to meeting outdoor recreation site and facility needs and open space needs in the County through the year 2010 and beyond. The plan is concerned primarily with the provision of County- and State-owned outdoor recreation sites and the protection of primary environmental corridors and other open space lands. The plan recommends the preparation of local park and open space plans by cities, villages, and towns, as appropriate, to guide the provision of local outdoor recreation sites and facilities required to serve residents of their urban areas. The recommended plan consists of an open space preservation element and an outdoor recreation plan element, as described below.

# Open Space Preservation

The open space preservation plan element builds upon the recommendations for the preservation of environmentally sensitive lands set forth in the County land use plan. Thus, the open space preservation plan recommends the preservation in essentially natural, open use of primary environmental corridor lands and the preservation, to the extent practicable, of secondary environmental corridors and isolated natural resource areas, recognizing that secondary environmental corridors and isolated natural resource areas may be incorpo-

rated as drainageways, open space reserves, and parks in developing areas. In addition, the plan recommends the preservation of lands within the project boundaries of the Wisconsin Department of Natural Resources located outside the planned environmental corridors and isolated natural resource areas. A total of 152 square miles of open space, excluding surface water, is recommended for preservation.

In 1995, a total of about 38 square miles, or about 25 percent of the area recommended for preservation, was in public or quasi-public ownership or in compatible outdoor recreation use. The plan recommends that an additional 51 square miles, or about 33 percent of the area proposed to be preserved, be acquired in the public interest. Lands proposed for acquisition include all primary environmental corridors located in planned urban areas; primary environmental corridors in planned rural areas which are proposed to be included in public parks or parkways; and primary environmental corridors, secondary environmental corridors, and isolated natural resource areas in planned urban areas and planned rural areas which encompass sites identified as important natural areas or critical species habitat areas. The plan envisions that the remaining 63 square miles, or about 42 percent of the open space area to be preserved, would be retained in private ownership and be protected through various types of conservancy zoning as recommended in the land use plan.

# Outdoor Recreation

The outdoor recreation element of the plan proposes a total of 19 major parks and one special regional outdoor recreation site to meet resource-oriented outdoor recreation needs in the County under buildout conditions. Specifically, the plan proposes the acquisition and development of two new major County parks, one to be located in the City of Brookfield and the other to be located in the Oconomowoc area; additional land acquisition and facility development at six County parks, Fox Bend, Minooka, Monches, Mukwonago, Retzer Nature Center, and Ryan; and additional facility development at six County parks, Fox River, Menomonee, Muskego, Naga-Waukee, Nashotah, and Wanaki. Most noteworthy among the additional recreational facilities proposed at the major County parks are the proposed development of a swimming beach at Fox Brook park and the development of 18-hole, regulation golf courses at Minooka and Mukwonago Parks and the proposed Oconomowoc-area park. The plan further envisions maintenance of three major parks, Lapham Peak, Ottawa Lake Recreation Area and